

AMENDMENTS TO THE CLAIMS

Claims 1-9 and 21-36 are canceled.

10. (Original) A lead for implantation into a human body, the lead comprising:

a unitary lead body assembly comprising:

a unitary wall having an inner portion that forms a lumen;

an inner layer having at least one conductor; and

an outer layer having at least one conductor, wherein the inner layer and the outer layer are within the unitary wall;

at least one electrode located at a distal end of the lead body; and

at least one connector located at a proximal end of the lead body, wherein the at least one connector and the at least one electrode are connected by at least one conductor.

11. (Original) The lead as claimed in Claim 10 wherein the unitary wall is comprised of extrusion material.

12. (Original) The lead as claimed in Claim 10, wherein no electrical insulation material is between the conductors and the unitary wall.

13. (Original) The lead as claimed in Claim 10, wherein the diameter of the lead is no greater than 34 French.

14. (Original) The lead as claimed in Claim 13, further comprising at least five electrodes.

15. (Original) A system for stimulating a portion of a body, wherein the system comprises:

a source for generating a stimulus; and

a lead for receiving the stimulus from the source, wherein the lead comprises:

a unitary lead body assembly comprising:

a unitary wall having an inner portion that forms a lumen;

an inner layer having at least one conductor; and

an outer layer having at least one conductor, wherein the inner layer and the outer layer are within the unitary wall;

at least one electrode located at a distal end of the lead body; and

at least one connector located at a proximal end of the lead body, wherein the at least one connector and the at least one electrode are connected by at least one conductor.

16. (Original) The system as claimed in Claim 15, wherein the unitary wall comprises extrusion material.

17. (Original) The system as claimed in Claim 15, wherein no electrical insulation material is between the conductors and the unitary wall.

18. (Original) The system as claimed in Claim 15, wherein the diameter of the lead is no greater than 34 French.

19. (Original) The system as claimed in Claim 15, wherein the lead comprises at least five electrodes.

20. (Original) The system as claimed in Claim 15 wherein the conductors are spirally wound around the lumen.

37. (New) A lead comprising:

a structure formed by an electrically insulating material having a lumen formed therein;

a first conductor operable to conduct an electrical signal and completely disposed in the structure formed by the electrically insulating material, the first conductor at a first distance from the lumen; and

a second conductor operable to conduct an electrical signal and completely disposed in the structure formed by the electrically insulating material, the second conductor at a second distance from the lumen, wherein the second distance is different than the first distance.

38. (New) The lead of claim 37 further comprising an electrode at the distal end of the lead, the electrode connected to the first conductor.

39. (New) The lead of claim 37 wherein the first conductor is disposed along the length of the lead.

40. (New) The lead of claim 37 wherein the first conductor is spirally wound around the lumen in a first direction.

41. (New) The lead of claim 37 further comprising at least a third conductor completely disposed in the structure formed by the electrically insulating material at the first distance from the lumen.

42. (New) The lead of claim 41 further comprising at least a fourth conductor completely disposed in the structure formed by the electrically insulating material at the second distance from the lumen.

43. (New) A stimulation assembly comprising:

a source for generating an electrical stimulus; and

a lead having at least one electrode receiving the electrical stimulus from the source, the lead being formed by:

a structure formed by an extrusion material having a lumen passing therethrough;

at least a first conductor completely surrounded by the structure at a first distance from the lumen; and

at least a second conductor completely surrounded by the structure at a second distance from the lumen, wherein the second distance is different than the first distance, and the at least a first conductor and at least a second conductor are electrically connected between the source and a corresponding one of the at least one electrodes.

44. (New) The lead of claim 43 wherein the first conductor is disposed along the length of the lead.

45. (New) The lead of claim 43 wherein the first conductor is spirally wound around the lumen in a first direction.